8.1.3.d *Crescent Heights (B 5-8)*

Site Description and Existing Conditions

Crescent Heights (B 5-8), located on the south rim of Los Penasquitos Canyon in Mira Mesa, is a 36-acre site will be dedicated for conservation purposes to the City of San Diego (LDR 99-0635, PTS 88530 [post-Coastal Commission SCR]). This conserved site is adjacent to the Lopez Ridge Vernal Pool Preserve, and to the MHPA as adjusted per LDR 99-0635. The southern boundary of the site is the road cut for Calle Cristobal. The area is zoned single family residential, and nearby land uses include open space, transportation, residential and neighborhood parks.

Seven natural vernal pools (1,837 feet^2 of basin area [171 m^2]) were mapped at Crescent Heights. Redding gravelly loam underlays the vernal pools and upland vegetation is characterized by sparse Diegan coastal sage scrub. No sensitive vernal pool species were present in 2003.

Although considered separately here due to ownership and conservation status, the Crescent Heights, Tierra Alta and Lopez Ridge vernal pools are geographically related and are part of the same complex and series.

Threats

Development

Crescent Heights has been conserved through the Crescent Heights project permitting process (LDR 99-0635, PTS 88530 [post-Coastal Commission SCR]).

Invasive Species

Upland vegetation is generally native, with limited non-native and/or naturalized species.

Trespass

Although the site is not completely fenced, a six-foot high chain link fence along a portion of the southern property and the existing road cut provide a barrier between the vernal pools and the sidewalk along Calle Cristobal. Trespass that does occur is generally limited to foot-traffic; off-road vehicle activity is limited in this area.

Litter

The site may be impacted by litter from car and foot traffic along Calle Cristobal. Occurrences of trash dumping are limited in this locality.

Fire and Fire Suppression

The Crescent Heights vernal pools are located between two large, vegetated open space areas. Fires in Lopez or Los Penasquitos Canyons may potentially impact this vernal pool site. The developed nature of much of the surrounding area would necessitate stringent fire-fighting measures; however, existing barriers may minimize this threat.

Current Management Activities

The site has been fenced in accordance with requirements of the Crescent Heights development approval (LDR 99-0635, PTS 88530 [post-Coastal Commission SCR]).

Management Recommendations

This site was identified as necessary to stabilize the populations of *E. aristulatum, P. abramsii, and B. sandiegonensis,* by the adopted *Recovery Plan of Vernal Pools in Southern California* (USFWS, 1998). All future management actions, including species reintroduction, should give priority to the maintenance and long-term viability of these populations.

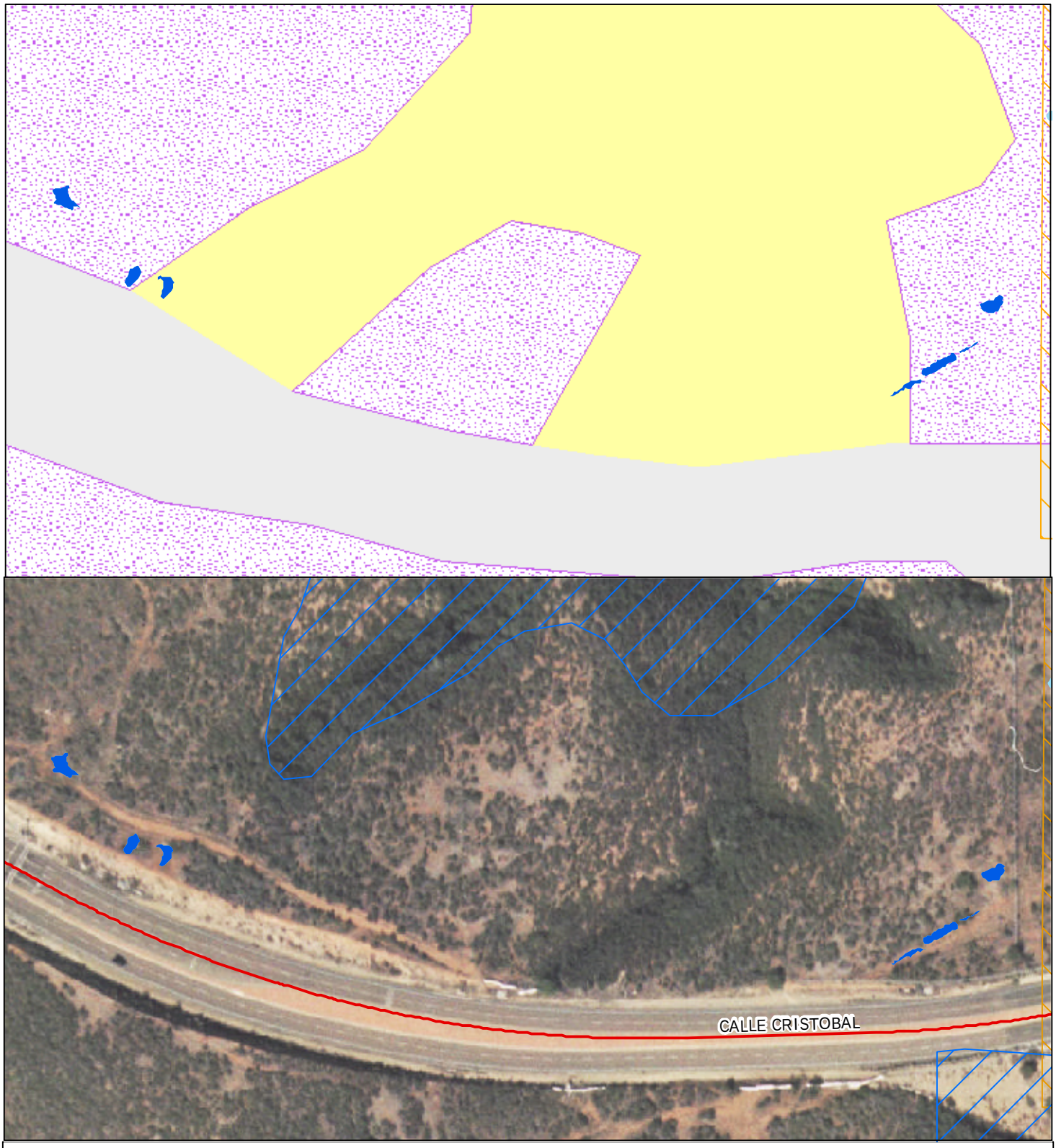
Annual maintenance should be required to provide fence and sign repair and trash removal, as necessary.

Weeding within and immediately adjacent to vernal pools should be done by hand. In upland areas, mechanical removal may be necessary, however, herbicides should not be used in or adjacent to vernal pools. Targeted species for removal include, but are not limited to Italian ryegrass (*Lolium multiflorum*), rabbitfoot grass (*Polypogon monspeliensis*), yard knotweed (*Polygonum arenastrum*), fennel (*Foeninculum vulgare*) and curly dock (*Rumex crispus*).

Adaptive management shall include management of the site to improve habitat conditions for native, solitary bees known as obligate pollinators for vernal pool species.

At the discretion of the land manager, educational programs may be provided to nearby schools, Home-Owner's Associations (HOAs), community groups, etc. Topics may include the local ecosystem, including vernal pools, habitat preservation (i.e. MSCP), and should incorporate hands-on learning via neighborhood hikes, etc. Programs should strive to present information in a manner that will increase interest in the natural world and cultivate local stewardship of open space, with the overall goal of developing positive neighborhood awareness of the preserve.

Figure 12



Crescent Heights (B 5-8)

Roads
MHPA
Conserved Lands
Vernal Pools at Site
Adjacent Vernal Pools
Coastal Sage Scrub
Maritime Succulent Scrub
Chaparral
Urban/Developed

0.03 Miles
0.07 Kilometers

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.

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8.1.3.e *Fieldstone (C 17-18)*

Site Description and Existing Conditions

Fieldstone (C 17-18) is located in northwestern Mira Mesa along Sunny Meadow Street. This 4.3-acre site was conserved via conservation easement through a U.S. Fish and Wildlife Service Biological Opinion (1-1-84-F-50) and is currently held in private ownership. In 2003, nine vernal pools totaling 1,281 m^2 (0.317 acres) were mapped, which is zoned Open Space and is within the MHPA. Fieldstone is adjacent to open space, roads, and residential development.

The vernal pools at Fieldstone are of natural origin, and occur within Redding gravelly loam soils. Upland vegetation is primarily chamise chaparral. *P. abramsii* occurs in the Fieldstone pools.

The site was conserved in the mid-1980s and, although surrounded by development on three sides, shows minimal signs of impacts from invasive species, trespass, trash and other edge effects.

Threats

Development

Vernal pools in the C 17-18 series were impacted by the construction of residential developments and the remaining basins—the existing Fieldstone site—were conserved as mitigation per USFWS Biological Opinion 1-1-84-F-50.

Invasive Species

Eucalyptus spp. has been planted along the boundary of the site in several places.

Edge Effects

The Fieldstone vernal pools are bounded on three sides by development. Impacts may occur from litter, unauthorized access, trash, etc. The site is fenced and appears to have been subject to only slight disturbance over the 20 years of conservation.

Fire and Fire Suppression

Given the developed surroundings, it is unlikely that wildfire or fire suppression activities pose a threat to the Fieldstone vernal pools.

Current Management Requirements

The site was fenced as a requirement of the Biological Opinion issued for this preserve (1-1-84-F-50); additionally, it was required that future clearing, grubbing or grading within the preserve should not occur without prior informal consultation and approval from the USFWS and Army Corps of Engineers.

Management Recommendations

The existing fencing should be repaired as necessary to minimize edge effects. Trash removal should also occur as needed. Signage should be installed with both informational and no-trespassing elements.

The eucalyptus trees should be removed from the perimeter of the site as required by the initial Biological Opinion (1-1-80-F-66). All removal activities shall occur under

the supervision of a qualified biologist to ensure minimal impacts to vernal pools. Native plant restoration is recommended in invasive removal areas to limit the recurrence of non-native species.

If it is determined that active management is necessary, it is recommended that volunteers and/or "Friends" groups be utilized for species surveys, litter patrols, weeding, etc. Due to the sensitivity of the habitats, adequate training shall be provided and crews shall be supervised by a qualified biologist.

Given the proximity of the site to residential neighborhoods, it is recommended that educational programs be provided through local schools, Home-Owner's Associations (HOAs), community groups, etc. Topics may include the local ecosystem, including vernal pools, habitat preservation (i.e. MSCP), and should incorporate hands-on learning via neighborhood hikes, etc. Programs should strive to present information in a manner that will increase interest in the natural world and cultivate a sense of ownership of local open space, with the overall goal of developing positive neighborhood awareness of the preserve.

Figure 13

Fieldstone (C 17-18)

Roads
MHPA
Conserved Lands
Vernal Pools at Site
Adjacent Vernal Pools
Coastal Sage Scrub
Urban/Developed

0.025
Miles
Kilometers
0.05

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.

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8.1.3.f *Winterwood (C 10-16)*

Site Description and Existing Conditions

Winterwood (C 10-16) is located to the south of Challenger Middle School in Mira Mesa. This 20-acre site is partially within the MHPA, and is owned and managed by the City of San Diego Parks and Recreation Department. Development of a community park has been proposed at the site, which is partially conserved. The area is zoned Active Parks, and surrounding land uses include residential, educational and transportation development.

Sixty-one vernal pools were mapped in 2003. While these basins were originally of natural origin, many are now deeply rutted as a result of off-road vehicle impacts. The basins cover a total of 3,291 m^2 (0.813 acres) and provide habitat for *E. aristulatum*, *P. abramsii*, and *B. sandiegonensis.* Upland vegetation is comprised of coastal sage scrub and disturbed coastal sage scrub, and the underlying soil series is Redding gravelly loam.

This site has been proposed for development as a community park. As part of the necessary permitting, DUDEK completed the *Winterwood Lane Community Park Biological Letter Report* (1992) for the City of San Diego Parks and Recreation Department. On October 18, 2002, a MHPA boundary line adjustment was processed for this site, under the name "McAuliffe Community Park."

Mitigation for impacts to the Magnatron site, which resulted in U.S. Environmental Protection Agency compliance order CWA 404-09a-94-005, were satisfactorily mitigated on 1.2 acres near the southeastern edge of Winterwood. Refer to the *Winterwood Park Vernal Pool Restoration and Preservation Plan* (RECON 1996) for additional information.

Prior to purchase of Winterwood by the City of San Diego, illegal impacts occurred during construction of the adjacent school. The San Diego Unified School District was issued a "Findings of Violation and Order for Compliance" by the U.S. Environmental Protection Agency on April 19, 1994, for grading and dumping activities within vernal pool basins. Remediation measures are discussed in detail below.

Several management actions recommended by the City of San Diego Vernal Pool Management Plan (1996) have been accomplished, including fence repair and an inspection of physical conditions completed as part of the City of San Diego 2002-2003 Vernal Pool Inventory.

Threats

Development

Development may occur at Winterwood; for example, a biological technical report has been prepared for the proposed park and a MHPA boundary line adjustment has been approved. In the future, this or other projects may be formally submitted for approval. Areas within the MHPA or used for mitigation may not be developed.

Invasive Species

Portions of the site have been colonized by *Erodium* spp. and *Brassica nigra*.

Trespass

Access to the site is limited by a fence along the north and east boundaries, while the south and east borders are partially protected by topographic features. In spite of these factors, access remains a problem given the proximity of Challenger Middle School and residential developments. Fences are periodically cut and/or gates are left open or unlocked.

Edge Effects

Edge effects such as litter, dumping and isolation from other vernal pool preserves are threats to the vernal pool ecosystems at Winterwood. Illegal dumping and grading occurred in 1986-1987; litter, concrete from construction sites, and an old child's swing-set were noted in basins in 2005.

Fire Suppression and Emergency Procedures

The potential for impacts due to fire suppression procedures are limited. The long-term impact of fire on vernal pool plants and animals appears to be minimal (see *Post Fire Evaluation of Vernal Pools* [City of San Diego MSCP Monitoring Report, 2004]).

Current Management Activities

The site is currently fenced on two sides with posted "No Trespassing" signs. The U.S. Environmental Protection Agency issued *Findings of Violation and Compliance Order* (Docket No. CWA 404-09a-94-004) regarding illegal impacts to vernal pools by the San Diego Unified School District. The required remediation includes the following actions:

- Cessation of unauthorized discharges
- Preparation of a remediation plan
- Successful completion of remediation, including acquisition and management plan preparation for an off-site preserve of 3,913 m^2 (42,117 ft^2) of vernal pools
- 5-year annual reporting program to document remediation activities

Management Recommendations

The *Vernal Pool Management Plan* (City of San Diego, 1996) recommended the following actions for Winterwood: Weekly inspections of physical conditions during the spring and fall, fence repair and notification of applicable agencies in the planning stages of future development proposals.

If impacts to vernal pools are approved, the mitigation shall include vernal pool and watershed restoration. In order to ensure long-term success, the mitigation shall include invasive species removal, fencing and signage, litter removal, monitoring and a fire management plan. An endowment or comparable funding mechanism should be set aside for the management of all mitigation sites in perpetuity.

If an on-site vernal pool preserve is required as mitigation for future project(s), the area shall be within or adjacent to the MHPA and of sufficient size and shape to protect both vernal pool basins and all associated watersheds. The applicant shall coordinate with the Park and Recreation Open Space Division to initiate the process to dedicate the preserve as City open space prior to project approval.

This site was identified as necessary to stabilize the populations of *E. aristulatum, P. abramsii, and B. sandiegonensis*, by the adopted *Recovery Plan of Vernal*

Pools in Southern California (USFWS, 1998). All future management activities shall promote the stabilization and recovery of these species.

Fence repair should occur as necessary in perpetuity. Semi-annual maintenance patrols should occur to determine the need for fence repair and/or signage replacement, as well as litter and invasive species assessment. Existing signage language is unclear and misspelled. Replace with clear, concise and correctly-spelled language.

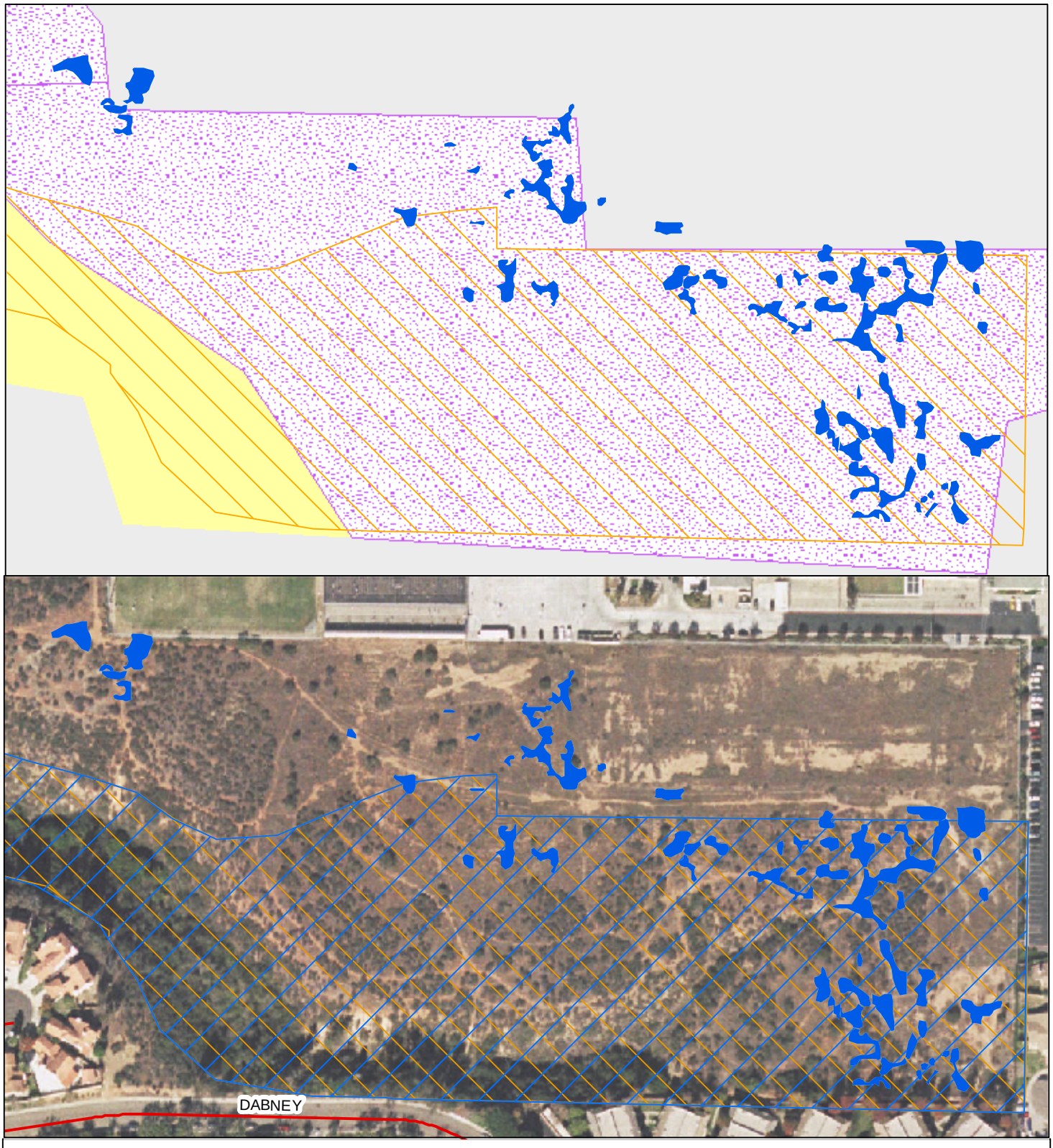
Weeding within and immediately adjacent to vernal pools should be done by hand. In upland areas, mechanical removal may be necessary; however, herbicides should not be used in or adjacent to vernal pools.

If the maintenance patrols determine that active management is necessary, volunteer and/or "Friends" groups may be utilized for species surveys, litter patrols, weeding, etc. Due to the sensitivity of the habitats, adequate training shall be provided and crews shall be supervised by a qualified biologist.

Given the proximity of the sites to an educational facility and residential neighborhoods, it is recommended that educational programs be provided through local schools, Home-Owner's Associations (HOAs), community groups, etc. Topics may include the local ecosystem, including vernal pools, habitat preservation (i.e. MSCP), and should incorporate hands-on learning via neighborhood hikes, etc. Programs should strive to present information in a manner that will increase interest in the natural world and cultivate a sense of ownership of local open space, with the overall goal of developing positive neighborhood awareness of the preserve.

Land managers should encourage research opportunities, especially relating to the long-term success of isolated vernal pool preserves of varying sizes.

Figure 14



Winterwood (C 10-16)

0.04
Miles
Kilometers
0.075

- Roads
- MHPA
- Conserved Lands
- Vernal Pools at Site
- Adjacent Vernal Pools
- Coastal Sage Scrub
- Chaparral
- Urban/Developed

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.